

ABSTRACT

TITLE OF THE ABSTRACT:

“A comprehensive study on Metabolic characteristics in subjects with Fibrocalculous Pancreatic Diabetes (FCPD) from India”

DEPARTMENT : Endocrinology, Diabetes and Metabolism,
Christian Medical College, Vellore.

NAME OF THE CANDIDATE : Riddhi Das Gupta

DEGREE AND SUBJECT : D.M.(Endocrinology)

NAME OF THE GUIDE : Professor Nihal Thomas

Keywords :

1. Pancreatic
2. Fibrocalcific
3. Insulin, Resistance
4. Glucagon

AIM / OBJECTIVES:*Describe the objectives of your study (maximum 30 words)*

In FCPD subjects, to assess - Hepatic, peripheral insulin sensitivity; Insulin, glucagon secretion capacity; Body composition, lipid content; To compare with individuals with Type1 Diabetes, Type2 Diabetes and non-diabetics.

MATERIAL & METHODS:*Explain the clinical and statistical methods used (max100 words)*

Twenty male FCPD subjects, 10 Type 1 Diabetes, 10 Type 2 Diabetes and 10 non-diabetic subjects attending the Endocrinology outpatient and inpatient departments at CMC, Hospital over a period of 1 year were included in this observational study after they met the inclusion/exclusion criteria and provided written informed consent. Apart from detailed history, anthropometric and systemic examinations, they underwent Euglycemic-Hyperinsulinemic pancreatic clamps to assess hepatic and peripheral insulin sensitivity, mixed-meal-challenge tests to assess insulin and glucagon secretion, indirect calorimetry, ¹H-NMR-spectroscopy to assess liver and muscle and body composition(DXA scan) studies. Statistical analysis was done using SPSSv.18.0 (IBM Corp. USA).

RESULTS:*Summarise the findings and conclusions of your study (maximum 90 words)*

Twenty male FCPD subjects, 10 Type 1 Diabetes, 10 Type 2 Diabetes and 10 non-diabetic subjects were recruited in this study.

In FCPD subjects,

- Hepatic and peripheral insulin sensitivity was significantly reduced in comparison to non-diabetics and similar to Type1 Diabetes subjects.

- Glucagon secretion was significantly greater than Type1 Diabetes and non-diabetic subjects.
- Insulin secretion was significantly reduced in comparison to non-diabetics and Type2 diabetes and greater than Type1 Diabetes subjects.
- Hepatocellular, intramyocellular and extramyocellular lipid content and body composition was similar to Type1 diabetes subjects.

CONCLUSIONS:

Hepatic and peripheral insulin resistance, reduced insulin secretion and increased glucagon secretion could be key factors in evolution of diabetes in FCPD. Patients with FCPD may benefit from insulin-sensitizing therapies in future.